

CLAIMS

1. An autonomous electrically powered vehicle that
5 requires, to power it, a significant mass and/or volume of
batteries, said batteries (31) being supported by an
independent chassis (4; 4'; 4") which is itself equipped
with at least one axle fitted with wheels (5; 5') and which
is designed to be accommodated in a housing (3) defined
10 under the chassis of the vehicle, the battery chassis (4;
4'; 4") having a longitudinal plane of symmetry (X-X')
perpendicular to its axle or axles and a transverse plane
(Y-Y') perpendicular to said longitudinal plane, and
connecting means being provided for connecting the battery
15 chassis (4; 4'; 4") and the vehicle chassis, said
connecting means comprising, on the one hand, locking means
for locking the battery chassis (4; 4'; 4") and the vehicle
chassis together and, on the other hand, an interface on
the battery chassis (4'; 4'; 4") side and an interface on
20 the vehicle chassis side including connectors for the
transmission of power and/or commands or information,
characterized in that said interfaces each further comprise
the complementary male and female parts of at least one
centering member and of at least one interconnection
25 member, the interface on the vehicle chassis side
consisting of a plate (10; 10') independent of said chassis
and joined to it at least three points, two of which are
controlled by rams (12) and the third of which adopts the
form of a ball joint (13).

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2. The vehicle as claimed in claim 1, characterized in
that said centering member adopts the form of two
complementary male (15) and female parts that interconnect
with a taper.

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3. The vehicle as claimed in any one of claims 1 to 2,

characterized in that said interconnection member adopts the form of two complementary male (16) and female parts which interconnect in a cylindrical form.

5 4. The vehicle as claimed in any one of claims 1 to 3, characterized in that said centering member and said interconnection member consist of two distinct parts of the same piece (14; 14'; 14"; 29).

10 5. The vehicle as claimed in any one of claims 1 to 4, characterized in that said connection device comprises a pair of interconnection members and a pair of centering members, which pairs are symmetric with respect to the longitudinal plane (X-X') of the battery chassis (4; 4';
15 4").

6. The vehicle as claimed in any one of claims 1 to 5, characterized in that said locking member consists of a headed threaded rod (20; 20'; 20") which passes through the
20 battery chassis (4; 4'; 4"), in a direction parallel to its longitudinal plane (X-X') or to its transverse plane (Y-Y'), and which can be secured to the interface plate (10; 10').

25 7. The vehicle as claimed in claim 6, characterized in that it comprises a pair of such headed threaded rods (20) designed to pass from end to end through the battery chassis (4) and the interface plate (10), parallel to the longitudinal plane (X-X') of the battery chassis (4; 4';
30 4"), and to be held in place by screwing into a nut.

8. The vehicle as claimed in claims 5 and 7, considered together, characterized in that said threaded rods are coaxial with said interconnection and/or centering members
35 and pass through them.

9. The vehicle as claimed in claim 6, characterized in that it comprises a threaded rod (20'; 20") designed to pass, parallel to the transverse plane (Z-Z') of the battery chassis (4; 4'; 4"), through the centering and/or interconnection member(s) and, from one lateral edge to the other, through the interface plate (10; 10'), whereas the complementary parts of said centering and/or interconnection members are coupled, said rod (20'; 20") being held in place by screwing into a nut.

10. The vehicle as claimed in any one of claims 1 to 9, characterized in that said connectors for transmitting power and/or commands or information are built into said at least one centering and/or interconnection member.

11. The vehicle as claimed in any one of claims 1 to 10, characterized in that said rams (12) are slaved to the steering of the vehicle and/or to whether the vehicle is traveling forward or backing-up.

12. The utility vehicle , characterized in that the opposite end of the battery chassis (4; 4'; 4") to its interface for connection with the vehicle chassis is roughly convex, when said chassis is viewed from above.

13. The autonomous vehicle as claimed in any one of the preceding claims, characterized in that said battery chassis (4) is equipped with a connection device (7) situated at the rear of said battery chassis (4).

14. The utility vehicle , in which said housing (3) is defined under the rear end (Ar) of the vehicle chassis, characterized in that, in service, said battery chassis (4') protrudes beyond the rear of the vehicle and is equipped with a bumper (9) and/or impact absorption device in its rear part.

15. The utility vehicle as claimed in any one of the preceding claims, characterized in that the battery chassis furthermore supports a battery charger.

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16. The utility vehicle as claimed in any one of the preceding claims, characterized in that the battery chassis furthermore supports an energy conversion device capable of recharging said batteries.

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17. The utility vehicle as claimed in any one of claims 1 to 16, characterized in that said propulsion motor is carried by said vehicle.

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18. The utility vehicle as claimed in any one of claims 1 to 16, characterized in that said propulsion motor is carried by said battery chassis, the motive power being transmitted to the vehicle via a driveshaft.

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19. The utility vehicle as claimed in any one of claims 1 to 18, characterized in that it incorporates an auxiliary motor allowing it to be moved around independently of its connection to said battery chassis (4; 4'; 4").

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20. The utility vehicle as claimed in any one of claims 1 to 18, characterized in that an auxiliary reserve of batteries is provided in the vehicle.